DOCUMENT RESUME

ED 078 026 TM 002 841

TITLE	What is an Aptitude?
INSTITUTION	Psychological Corp., New York, N.Y.
PUB DATE	Aug 48
NOTE	2p.; Reprint
AVAILABLE FROM	Test Service Bulletin, The Psychological Corporation, New York, N.Y.
JOURNAL CIT	Test Service Bulletin; n36 p2-3 Aug 1948
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Academic Achievement; Academic Aptitude; *Aptitude; *Aptitude Tests; Bulletins; Intelligence; Personality; *Predictive Ability (Testing); Skills

ABSTRACT

An analysis of a dictionary definition of "aptitude" could clear up several prevalent misunderstandings of the concept. Nothing inherent in the concept assumes that aptitudes are hereditary; aptitude is the result of the interaction of heredity and environment. "Apritude" has a broad definition; it includes intelligence, achievement, personality, and interests, as well as other abilities and skills. Aptitude is best summarized as a capacity to learn. The measurement of aptitude is the assessment of knowledge, skill, and any other characteristics which serve to predict learning success. An aptitude test is any test which is used for prediction of some type of learning. (For related documents, see TM 002 842-845.) (KM)

ED 078026

Test Service Bulletin

Nos. 36-40 THE PSYCHOLOGICAL CORPORATION 1948-1950

Published from time to time in the interest of promoting greater understanding of the principles and techniques of mental measurement and its applications in guidance, personnel work, and clinical psychology, and for announcing new publications of interest. Address communications to 304 East 45th Street, New York 17, N. Y.

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TM 002 841-845

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ED 078026

TM 002 841

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No. 36 THE PSYCHOLOGICAL CORPORATION August, 1948

WHAT IS AN APTITUDE?

As interest in any technical field becomes increasingly widespread, it is perhaps inevitable that misconceptions concerning some of the relevant concepts and terminology should appear. This seems to be especially true of aptitude testing. That the misconceptions should refer to the basic understanding of the term "aptitude" itself is of serious import; clarification of the concept and resolution of differing meanings is vital, not only to aptitude testing but to the entire field of psychological measurement.

The definition of aptitude which Dr. Bingham prepared for Warren's *Dictionary of Psychology* is an excellent starting point for elucidation of the concept:

> APTITUDE. *A condition or set of characteristics regarded as symptomatic of an individual's ability to acquire with training some (usually specified) knowledge, skill, or set of responses, such as the ability to speak a language, to produce music. . . .*

A complete appreciation of this definition would do away with a number of misunderstandings which are prevalent. We may note, first, that nothing inherent in this concept assumes that aptitudes are hereditary. The expression "born that way" is a dangerous fallacy which still is heard even among educated people. On the other hand, one cannot undertake to make every average person into a genius. Fortunately for our present purpose, we really do not need to determine *how much* of an aptitude is hereditary and how much reflects environmental forces. Aptitude is the result of the interaction of heredity and environment. The infant is born with certain potentialities, and begins learning immediately. What he learns makes it possible for him to learn more. It is similar to the investment of capital which bears interest, the interest then becoming additional capital which also may be reinvested to earn still more interest.

A second important feature of the definition is that it is extremely broad. As conceived herein, aptitude embraces intelligence and achievement, personality and interests as well as any other abilities and skills which predispose to learning. The use of the term aptitude as being limited only to the specialized learning capacities for music or engineering or stenography is misleading. The familiar intelligence tests have found favor because they predict the student's ability to learn to read, or write compositions, or bisect an angle, or understand social trends. In other words, they are aptitude tests which describe the student's potentiality for learning in a number of academic subjects or vocational endeavors. This has been recognized in the healthy tendency to speak of scholastic aptitude tests rather than intelligence tests. A more sophisticated understanding of the nature of intelligence and aptitude has made this trend inevitable.

Many of us who have accepted the idea that intelligence tests measure aptitude have failed to recognize that achievement tests are also aptitude tests when used most purposefully. The most important function which an achievement test can serve is to make evident what the person has learned, either so that we can predict how well he will learn additional material of a similar nature, or to indicate whether he has the skills or knowledge required for future success in a particular profession or trade. The use of an achievement test score solely for recording a person's accomplishment is relatively sterile; only when it predicts, obviously or indirectly, is such measurement maximally useful.

The importance of interests and other personality traits for learning skills or acquiring knowledge needs no exposition. How well a person will acquire proficiency depends so much on his interest in the task, on his drives and his goals, that the layman appreciates these conditioning factors as thoroughly as does the psychologist. It is only when the term aptitude is too narrowly delimited that the contributions of interest and personality are overlooked as aspects of aptitude.

The total concept can perhaps be summarized by regarding aptitude as simply a capacity to learn. When we refer to stenographic aptitude, we mean the capacity to learn those skills which make for a successful stenographer.

This is a relatively specific aptitude. When we refer to academic aptitude, we mean the capacity to complete successfully a more comprehensive curriculum. This is really a broader set of aptitudes, and we frequently use so-called tests of general mental ability to facilitate our prediction. It is noteworthy that the modern trend is away from single score intelligence tests in favor of tests which yield several scores – e.g., verbal, numerical, abstract, mechanical, etc. This is a recognition that for specific courses or jobs, the best prediction can be obtained from more specific measurement than is yielded by an undifferentiated single "intelligence" score or IQ.

The measurement of aptitude, then, is the assessment of knowledge, skill, and any other characteristics which serve to predict learning success. Usually test data are the most important bases for such prediction. Sometimes background data which reveal experience, interest or personality characteristics may be equally fruitful sources of prediction. Industry's use of the weighted application blank, for example, is based on solid experience with the value of biographical data.

What, then, is an aptitude test? It is any test which is used for prediction of some type of learning. Its validity as an aptitude test depends on the extent to which it will predict successfully. We probably shall continue to categorize tests as intelligence tests, achievement tests, interest tests, special aptitude tests, etc. as though there were no overlap in their functions. However, we must not let ourselves become confused by our own practical pigeon-holing. To avoid erroneous thinking about prediction, we need to keep constantly in mind the broad definition of aptitude. – A. G. W.

Professional journals of interest to test users . . .

Letters from clients of the Test Division rather frequently ask, among other questions, "Where can I learn more about what has been done or what is going on in this or that field of measurement?" The fields range from industrial through educational to clinical; the inquirer may be a school superintendent, a personnel manager, a teacher assigned to counseling duties, or a physician concerned with psychosomatic hypotheses – each interested in broadening his background to take in a little more of a discipline not covered in his original training. To help in closing this gap, the following annotated list of periodicals has been prepared. It is not intended for the professional clinical or industrial psychologist who presumably is well acquainted with the journals in his field, but rather for those to whom testing and related activities are a secondary or recently-acquired interest and responsibility. Among these latter are the social workers, the pediatricians, the placement counselors, the educational administrators, and others not trained in psychometrics but forced by events to take account of the growing use of psychological tools touching their specialties.

Some readers will find it convenient to consult these journals from time to time in the nearest library; others will want them on a regular subscription basis. The publishers' addresses are given – communicate with them directly. Please do NOT send money or inquiries about these periodicals to The Psychological Corporation.

PERSONNEL PSYCHOLOGY. Broad coverage of industrial psychology. Both theoretical and practical, thorough and competent articles reporting research in applications of testing and other personnel methods. Written for both the intelligent layman and the specialist. A "must" for those in industry and of almost equal interest to counselors. Published by Personnel Psychology, Inc., Box 6965, College Station, Durham, North Carolina 27708.

EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT. Research reports and discussion of measurement problems. Fairly technical. Of primary interest to educational administrators, research directors and counselors; some articles of interest to industrial and clinical workers. Published by Educational and Psychological Measurement, Box 6907, College Station, Durham, North Carolina 27708.

PERSONNEL AND GUIDANCE JOURNAL. Articles include research reports and essays on testing and other aspects of guidance. A "must" for educational and vocational counselors; of secondary interest to educational administrators and industrial personnel men. Official organ of the American Personnel and Guidance Association, Inc., 1607 New Hampshire Avenue, N.W., Washington, D.C. 20009.

JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY. Case studies, theoretical articles, and research reports with a clinical orientation. Provides descriptive listings of new tests and books on testing. Important for counselors, physicians and social worker; less valuable but still worthwhile for school and industrial workers. Published by the American Psychological Association, Inc., 1200 Seventeenth St., N.W., Washington, D.C. 20036.

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